

### **REMARKS**

In the Final Office Action identified above, the Examiner:

- a) rejected claims 11, 19, and 20 under 35 U.S.C. § 103(a) as being unpatentable over Shimagaki et al. (U.S. Patent No. 6,953, 388, "Shimagaki") in view of Burke (U.S. Patent App. Pub. No. 2002/0098789, "Burke") and further in view of Kojima et al. (U.S. Patent No. 6,531,399, "Kojima");
- b) rejected claims 12-16 under 35 U.S.C. § 103(a) as being unpatentable over Shimagaki in view of Burke in view of Kojima, and further in view of You et al. (U.S. Patent No. 6,663,787) ("You"); and
- c) rejected claims 17 and 18 under 35 U.S.C. § 103(a) as being unpatentable over Shimagaki in view of Burke in view of Kojima, and further in view of Jang et al. (U.S. Patent No. 5,702,977) ("Jang").

By this Amendment After Final, Applicants propose to amend claim 11 to more appropriately define the invention. Upon entry of this Amendment After Final, claims 1-20 will be pending, with claims 11-20 under examination.

At the outset, Applicants propose to amend independent claim 11 to recite "said polishing pad having a compression elastic modulus ranging from **300 to 600 MPa** (emphasis added)." Support for the proposed changes may be found in the Specification at, for example, page 26, lines 3-8. Applicants' proposed claim amendments are not deemed to raise new issues requiring further consideration or search.

Applicants respectfully traverse the Examiner's rejection of claims 11, 19, and 20 under 35 U.S.C. § 103(a) over Shimagaki in view of Burke and Kojima. A *prima facie* case of obviousness has not been established.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). M.P.E.P. § 2142 (8th ed. August 2006 revision).

A *prima facie* case of obviousness has not been established because, among other things, the combination of Shimagaki, Burke, and Kojima fails to teach or suggest each and every element recited in independent claim 11. In particular, the cited references fail to teach or suggest the claimed polishing treatment including "polishing pad having a compression elastic modulus ranging from 300 to 600 MPa," as recited in claim 11.

The Examiner admits that the combination of Shimagaki and Burke references do not teach the compression elastic modulus of the pad. Final Office Action at page 3. Indeed, Shimagaki and Burke are absolutely silent as to any compression elastic modulus of a polishing pad. However, the Examiner relies on Kojima to teach the claimed compression elastic modulus of a polishing pad.

Kojima teaches polishing a workpiece 6, which comprises a silicon wafer with a silicon dioxide film, using a polyurethane foam polishing pad 6. An information processor 18 is used to measure a polishing efficiency of such polishing conditions in

order to determine if a dressing step is necessary. See Kojima, col. 4, lines 6-65. Kojima, however, does not teach or suggest a compression elastic modulus of 300 to 600 MPa, but instead only teaches that the polyurethane pad has a compression elastic modulus of approximately 100 MPa. Thus, Kojima does not teach or suggest at least the claimed "said polishing pad having a compression elastic modulus ranging from 300 to 600 MPa," as recited in claim 11.

Thus, no *prima facie* case of obviousness has been established regarding claim 11, and claims 19 and 20, which depend from claim 11. Accordingly, claims 11, 19, and 20 are allowable over the Examiner's proposed combination of Shimagaki, Burke, and Kojima.

Applicants respectfully traverse the Examiner's rejection of claims 12-16 under 35 U.S.C. § 103(a) as being unpatentable over Shimagaki in view of Burke in view of Kojima, and further in view of You, and the rejection of claims 17 and 18 under 35 U.S.C. § 103(a) as being unpatentable over Shimagaki in view of Burke in view of Kojima, and further in view of Jang. The Examiner relies on the disclosure of You only to teach a copper damascene method. Similarly, the Examiner applies Jang to teach an insulating film buried in a trench. However, even if such teachings are present in these references, both You and Jang still fail to teach the claimed "said polishing pad having a compression elastic modulus ranging from 300 to 600 MPa," as recited in claim 11. In fact, both references are entirely silent as to any polishing method, and thus necessarily fail to teach the claimed compression elastic modulus range of the polishing pad. *non break*

Thus, no *prima facie* case of obviousness has been established, and claims 12-18 are allowable over the Examiner's proposed combination of the cited references.

order to determine if a dressing step is necessary. See Kojima, col. 4, lines 6-65.

Kojima, however, does not teach or suggest a compression elastic modulus of 300 to 600 MPa, but instead only teaches that the polyurethane pad has a compression elastic modulus of approximately 100 MPa. Thus, Kojima does not teach or suggest at least the claimed “said polishing pad having a compression elastic modulus ranging from 300 to 600 MPa,” as recited in claim 11.

Thus, no *prima facie* case of obviousness has been established regarding claim 11, and claims 19 and 20, which depend from claim 11. Accordingly, claims 11, 19, and 20 are allowable over the Examiner’s proposed combination of Shimagaki, Burke, and Kojima.

Applicants respectfully traverse the Examiner’s rejection of claims 12-16 under 35 U.S.C. § 103(a) as being unpatentable over Shimagaki in view of Burke in view of Kojima, and further in view of You, and the rejection of claims 17 and 18 under 35 U.S.C. § 103(a) as being unpatentable over Shimagaki in view of Burke in view of Kojima, and further in view of Jang. The Examiner relies on the disclosure of You only to teach a copper damascene method. Similarly, the Examiner applies Jang to teach an insulating film buried in a trench. However, even if such teachings are present in these references, both You and Jang still fail to teach the claimed “said polishing pad having a compression elastic modulus ranging from 300 to 600 MPa,” as recited in claim 11. In fact, both references are entirely silent as to any polishing method, and thus necessarily fail to teach the claimed compression elastic modulus range of the polishing pad.

Thus, no *prima facie* case of obviousness has been established, and claims 12-18 are allowable over the Examiner’s proposed combination of the cited references.


Applicants respectfully request that this Amendment under 37 C.F.R. § 1.116 be entered by the Examiner, placing claims 11-20 in condition for allowance. Applicants submit that the proposed amendment of claim 11 does not raise new issues or necessitate the undertaking of any additional search of the art by the Examiner, and should allow for immediate entry by the Examiner. Therefore, entry of this Amendment and a timely issuance of a Notice of Allowance are earnestly requested.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,  
GARRETT & DUNNER, L.L.P.

Dated: October 25, 2006

By:   
Selah C. Park  
Reg. No. 57,127